

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Indian Health Service

Refer to: DOH

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ALBUQUERQUE AREA INDIAN HEALTH SERVICE CIRCULAR NO. 89-05

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ALBUQUERQUE AREA IHS WATER FLUORIDATION POLICY

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1. **PURPOSE.** To establish a uniform policy for the implementation and operation of the Albuquerque Area IHS Water Fluoridation Program in conjunction with the Indian Health Service Fluoridation Policy (August 27, 1981).
2. **BACKGROUND.** Studies of water fluoridation are numerous in the United States and in many other countries. While these studies may vary widely in their design, they are remarkably uniform in their results. The conclusion from this mass of information is that water fluoridation reduces the prevalence of dental caries in children by forty to sixty percent, depending on the ages studied. Over a lifetime, fluoridation has been estimated to reduce caries by approximately forty percent.

Fluoridation of Community water systems has emerged as one of the most important public health measures of the twentieth century because of:

- a. The high degree of effectiveness in the reduction of dental caries in children who have consumed the water from birth
- b. The demonstrated safety of appropriately fluoridated water systems
- c. The ease of implementation
- d. The low cost

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Distribution: All Indian Health Manual Holders  
All Albuquerque Area Program Managers  
All Service Unit Directors  
All Chiefs, Service Unit Dental Programs

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Fluoridation benefits the entire population serviced by the water supply, regardless of socioeconomic or educational background, and the benefits extend into the adult-hood. In addition, no effort is necessary to acquire the benefits other than consuming the water.

The natural fluoride concentration in most of the water used by Indian communities in the Albuquerque Area is lower than the level recommended for the reduction of dental caries as suggested by the American Dental Association and is below the lower recommended control limits of the National Interim Primary Drinking Water Regulations (NIPDWR).

While the dental caries rate appears to be decreasing nationwide, the prevalence of dental caries in the Albuquerque Area has remained approximately two and one-half times higher than the surrounding non-Indian population, based on the 1984 Oral Health Survey (IHS). Indian children have a much higher risk of developing dental caries, in spite of the declining caries prevalence in the non-Indian populations.

3. POLICY. It is the policy of the Albuquerque Area Indian Health Service to assure that the Indian people of the Albuquerque Area have access to the benefits of optimally fluoridated community drinking water.

The adjustment of the fluoride concentrations in drinking water to optimal levels is required when all of the following criteria are met:

- A. The naturally occurring fluoride levels are less than the lower recommended control limits of the National Interim Primary Drinking Water Regulation (NIPDWR).
- B. The fluoridation of the water supply is acceptable to the community being served.
- C. The supplier of the water agrees to monitor, operate and maintain the fluoridation equipment; a practice that is consistent with the responsibility that the supplier of water assumes for any sanitation facility under the supplier's control.
- D. The design and/or physical configuration of the water system can incorporate or be adapted to incorporate fluoridation equipment.

Where fluoridation of community water supplies is not feasible, or in areas where homes are served by fluoride-deficient individual water systems, efforts shall be made, consistent with P.L. 86-121 policy, to fluoridate the local school water system.

Where Indians are served by non-Indian community water systems under state or local control, the Albuquerque Area IHS will consult with and provide assistance to state or local officials in promoting and implementing community fluoridation programs.

4. DEFINITIONS.

- A. Surveillance is defined as the continuous, comprehensive review of the fluoridation program, including a review of the adequacy of monitoring, reporting, operation and maintenance.
- B. Monitoring is defined as the routine collection and analysis of water samples to determine if the fluoride is within the desired range.
- C. Community Water System is defined as a system having at least fifteen service connections or regularly serving an average of at least twenty-five people daily for at least sixty days each year. (EPA Safe Drinking Water Act).

5. OBJECTIVES/RESPONSIBILITIES. This policy is to be accomplished through the following seven objectives:

- A. OBJECTIVE 1:  
To promote fluoridation by assuring that tribal members and IHS personnel receive education concerning the benefits and methodologies of water fluoridation.

Primary Responsibility: Area Director and Service Unit Directors.

Functions:

- 1. Establish and maintain a fluoridation committee composed of personnel with health education, environmental health, dental, and/or other expertise as appropriate, with a designated team coordinator\*\* at the Service Unit and Area levels that:
  - a. meets monthly;
  - b. formulates an overall fluoridation plan, in accordance with the Albuquerque Area fluoridation policy;
  - c. evaluates, maintains, develops where necessary, and distributes fluoridation information materials;

\*\* It is recommended that Area and Service Unit Dental Officers be designated as fluoridation team coordinators and that the team include tribal representation. The team can be a component of the Health-Promotion, Disease-Prevention committee.

- d. educates IHS and tribal staff on the merits of fluoridation and on the details of the fluoridation program;
  - e. presents fluoridation information to community groups;
  - f. provides continuing education and disseminates fluoridation information materials to IHS, tribal leaders and community people working in the fluoridation program;
  - g. maintains a current file of any resolutions that each community or tribe may have adopted in favor of, or opposing fluoridation, and forwards a copy to the Area Office of Environmental Health and Engineering and Division of Oral Health Services;
  - h. keeps the Service Unit Directors and Area Director informed, as appropriate, on progress or problems in the fluoridation program.
2. Requests an opportunity, at least annually, to present the fluoridation option to non-fluoridated communities where a desire for fluoridation has not yet been expressed. Such presentations, to be made by the Dental Program, will include a description of the needs, benefits, costs, and responsibilities of fluoridation, and IHS responsibilities for purchasing and installing the equipment, and for training the water systems operators.
3. Arranges, at least annually, for the Area or Service Unit Dental Officer to provide a fluoridation status report to the community governing authorities.

B. OBJECTIVE 2:

To summarize the adequacy of the fluoride levels and the existence of, or need for fluoridation equipment as an integral part of the annual report on Sanitation Facilities serving Indian people.

Primary Responsibility: Area and Service Unit Office of Environmental Health and Engineering.

Functions:

- 1. Maintains and annually updates information in the Sanitation Deficiency System that will indicate for each water system:
  - a. the existence or need for fluoridation or defluoridation;

- b. the status of compliance of water systems with the required fluoride concentration range.
2. Unless a community has determined that it does not want fluoride added to its water, estimates the cost of providing needed equipment, training, and one-year supply of chemicals as a part of the sanitation deficiencies of each sanitation facility. The information shall be reported in the Sanitation Deficiency System.
3. Prioritizes the sanitation deficiencies of each sanitation facility, including fluoridation needs, using the Sanitation Deficiency System. A high priority shall be given to meeting community fluoridation needs.
4. Prepares as annual report that includes the fluoridation status of all Area water systems and the needs for equipment and training.

C. OBJECTIVE 3:

To provide for the purchase and installation of fluoridation equipment (chemical feeders, analyzers and safety equipment).

Primary Responsibility: Area and Service Unit Office of Environmental Health and Engineering.

Functions:

1. As project funds for new or improved sanitation facilities to serve existing homes become available, the Project Summaries shall address the status of fluoridation, including estimated costs of operation and maintenance, and whether or not equipment will be installed. Rationale for the decision should be based on the previously listed criteria (Item III.). This decision will be reviewed with the Chief, Service Unit Dental Program, with the SUD, and with the Director, Division of Oral Health Services prior to the referral of the Project Summary to the Area Director for signature.
2. Where sanitation facilities are to be constructed or improved to serve new or improved housing (housing funds), the Project Summary shall address fluoridation. Rationale will include the same criteria as the previous paragraph and the decision will be similarly reviewed.
3. To the extent that the IHS can make special or other funds available to the Area for fluoridation, those funds shall be utilized where the maximum improvement in oral health, per dollar expended, can be realized.

4. Increased capital costs for installing fluoridation equipment shall not in and of itself be sufficient reason to omit fluoridation equipment from the system, or to not actively promote fluoridation to the tribal government and/or community.
5. The Albuquerque Area Office of Environmental Health and Engineering will standardize fluoridation equipment as much as possible in the interest of simplicity, safety, and economy of operations and procurement of replacement parts and chemicals.
6. For water systems that serve Indian communities but are owned by other entities (city, county, districts, Bureau of Indian Affairs), the IHS shall promote fluoridation and, where feasible, share installation costs on a prorata basis with the owners of the system, according to the authorities of P.L. 86-121.
7. Wherever the IHS is involved in the provision of fluoridation equipment, the IHS will:
  - a. assure that water systems operators have access to accurate fluoride analytical instruments or analytical service;
  - b. provide necessary safety equipment and training in safety measures for water system operators.

D. OBJECTIVE 4:

To assure that new fluoridation equipment installed by the IHS is functioning correctly and is able to consistently deliver water containing the desired fluoride concentration.

Primary Responsibility: Area and Service Unit Office of Environmental Health and Engineering.

Functions:

1. On initial startup, field analysis of water samples shall be conducted every day until the recommended range is obtained for at least ten consecutive days.
2. Analytical results obtained during the startup period, as well as maintenance and repair experience prior to transfer of the equipment, shall be recorded. In addition, a "Fluoridation System Add/Delete Form"

(Form HSA-T-Fluoridation Data System) shall be completed and submitted to the IHS Fluoridation Data System.

3. At the time of transfer of the system to the tribe, verification of field analytical instrument accuracy shall be made by obtaining a water sample and comparing field analytical results with results obtained on a portion of the same sample submitted to a Regional, Area, or state laboratory.
4. At the time of transfer of ownership, all fluoridation equipment shall be installed and operating properly. In addition, all chemicals and appurtenances (masks, aprons, reporting forms) shall be available and properly stored.

E. OBJECTIVE 5:

Community water system operators will be trained in monitoring fluoride levels and in maintaining the fluoridation equipment in proper working order.

Primary Responsibility: Area and Service Unit Division of Oral Health Services and Office of Environmental Health and Engineering.

Functions:

1. Training should include the presence of water operators during installation so that component parts are identified and observed being put in place.
2. Training in the operation of the fluoride feed equipment, analytical equipment, and use of safety equipment should result in the operators being able to demonstrate to the trainer that fluoride levels can be maintained within the acceptable range, that analytical instruments can be used properly and accurately, and that safety equipment can be properly used.
3. Appropriate training reference materials and O&M Manuals should be provided to the operators.
4. Operators should be able to accurately explain analysis, monitoring and reporting requirements, safety precautions, fluoride concentration calculation, and demonstrate procurement procedures to the satisfaction of the trainer.
5. Operators shall receive training from the Area or Service Unit Dental Officer on the value of optimal water fluoridation to oral health.

6. All replacement or supplemental water system operators shall receive the training as indicated in Items 2 and 5 above.

F. OBJECTIVE 6:

To provide surveillance, on a regular basis, of water systems having adjusted fluoride levels and make recommendations for necessary remedial actions to the appropriate community authorities.

Primary Responsibility: Service Unit Directors and Area Division of Oral Health Services.

Functions:

1. The Service Unit Directors shall be responsible for seeing that monitoring is adequately performed and that results are properly reported. To assure that the Service Unit Directors meet these responsibilities, the Director, Division of Oral Health will provide monthly reports from the Albuquerque Area and the IHS Fluoridation Data System, for each fluoridated water system in the Service Unit. Copies of the reports will also be provided to OEH&E, Area Director, tribe, water operators and Chief, Service Unit Dental Program.
2. The Service Unit Directors shall assure that tribes receive education about their responsibility to collect three water fluoridation samples per week and to submit the samples to the Service Unit Laboratory.
3. The Service Unit Laboratory shall analyze the samples within 48 hours of receipt and will submit the results to the coordinator of the Service Unit fluoridation team.
4. Where acceptable monitoring and reporting is not performed by the tribe, the Service Unit Director shall request the fluoridation team coordinator to arrange to have samples collected, analyzed, and results submitted to the Fluoridation Data System. The IHS, however, should not assume routine monitoring responsibility.
5. Whenever laboratory analytical results indicate that the system is being improperly fluoridated, or that the water system operator's analytical results may be faulty, the supplier of the water or the system operator shall be notified within 48 hours and technical or other assistance will be offered.



G. OBJECTIVE 7:

To provide technical assistance where surveillance reveals that problems exist and when technical assistance is requested by the tribe/community.

Primary Responsibility: Area and Service Unit Division of Oral Health Services and Office of Environmental Health and Engineering.

Functions:

1. Technical assistance by the Albuquerque Area IHS shall be available to the tribes upon request.
2. Where problems are being experienced by the tribes in maintaining the fluoride levels within recommended ranges, technical assistance will be offered by the IHS.

6. CONTROL LIMITS, SAMPLE COLLECTION AND ANALYSIS AND REPORTING REQUIREMENTS.

A. Control Limits

The fluoride level in fluoridated water systems should be maintained as close to the recommended concentration as possible, and in no case above or below the ranges noted below.

Annual Average of Recommended Fluoride

Av. Daily Air Temperatures	<u>Ideal Fluoride Level *</u>		<u>Target Fluoride Range*</u>	
	Community	School	Community	School
50.5 – 53.7	1.2	5.4	1.1 – 1.7	4.3 – 6.5
53.8 – 58.3	1.1	5.0	1.0 – 1.6	4.0 – 6.0
58.4 – 63.7	1.0	4.5	0.9 – 1.5	3.6 – 5.4
63.9 – 70.6	0.9	4.1	0.8 – 1.4	3.3 – 4.9
70.7 – 79.2	0.8	3.6	0.7 – 1.3	2.9 – 4.3
79.3 – 90.5	0.7	3.2	0.6 – 1.2	2.6 – 3.8

\*parts per million (ppm) of fluoride ion in water.

B. Sample Collection and Analysis

1. Samples for analysis should be obtained from a tap on a main line of the water system that is representative of the water throughout the system. More than one sample may be required in some systems with multiple sources.
2. Samples for fluoride analysis should be collected and analyzed as follows:
  - a. a minimum of three samples per week per system and one split sample per month per system;
  - b. when equipment failure or malfunction is suspected;
  - c. immediately following repair of equipment.
3. All fluoride analysis instruments should have their measurement results verified by split sampling of one sample per month. The split sample should be analyzed at a recognized laboratory, preferably an EPA or state-approved facility.

C. Reporting

1. Analytical Results: Analytical results of all samples for each water system should be recorded by the Service Unit laboratory on the Fluoride Analysis Report Form (HSA-T) and submitted to the coordinator of the S.U. fluoridation committee who will mail the reports to the address indicated on the form.
2. Maintenance and Repair Reports: Fluoride System Maintenance and Repair Reports are important in assessing the maintenance and repair capabilities of the communities, in assessing the reliability and appropriateness of various types of equipment and as a determinant of needs for further technical assistance and training. The IHS Fluoride Maintenance and Repair and Report Form (HSA-T) should be completed by tribal water system operators and submitted for data processing to the address indicated on the form when maintenance or repair is performed. All water sources within systems should be identified with a unique two-digit identifier added to the sanitation facility number (unique EPA identifier number). The Albuquerque Area OEH&E should maintain a master list of sanitation facility codes and source numbers. These

numbers should be used when reporting routine maintenance and repair activities. The Fluoride Maintenance and Report Reporting System allows for information input by tribal, IHS, or other sources.

7. CRITERION FOR SUCCESS.

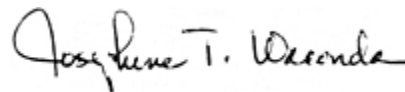
The existence of an operational and effective water fluoridation program.

Process objectives:

- A. The Service Unit Director will assure that all water systems in the Service Unit that serve fifteen or more homes will have fluoridation systems installed and functioning if the water sources of those systems have less than optimum concentrations of fluoride naturally present.
- B. The Service Unit Director will be able to demonstrate that all fluoridated water systems have been regularly monitored on a daily basis to determine whether the fluoride levels were consistently maintained within the optimal range.
- C. The Service Unit Director will be able to document that timely analyses were performed and appropriate actions were taken to make corrections in those systems in which the fluoride levels were above or below the optimum range.

Fully Successful: Documentation exists to show that the Service Unit has an operational water fluoridation program that satisfactorily complies with the stated process objectives.

- 8. REFERENCE. IHS Fluoridation Policy (08/27/81).
- 9. SUPERSESSION. This is in effect until it is superseded.



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